

## **NEURAL NETWORK PREDICTIVE CONTROL COST FUNCTION**

### **ABSTRACT OF THE DISCLOSURE**

A method, a computer-readable medium, and a system for tuning a cost function to  
5 control an operational plant are provided. A plurality of cost function parameters is selected.  
Predicted future states generated by the neural network model are selectively incorporated  
into the cost function, and an input weight is applied to a control input signal. A series of  
known signals are iteratively applied as control input inputs, and the cost output is calculated.  
A phase is taken of the control and plant outputs in response to each of the known signals and  
10 combined, thereby allowing effective combinations of the cost function parameters, the input  
weight, and the predicted future states to be identified.



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